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## RESEARCH HIGHLIGHT

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## USES OF DEVELOPMENT COST CHARGES

## BACKGROUND

CMHC studied government-imposed costs on new housing in Canadian municipalities using 1996 and 2002 data. Federally, there is the Goods and Services Tax (GST), and provincially, land transfer taxes, registry fees, new home warranty fees and sales taxes. Municipalities have a number of services-related levies, fees and charges. They include development cost charges (DCCs)<sup>1</sup>, which are fees used to finance new infrastructure; land dedications, which provide municipalities with the value of land required for parks or schools; and, fees for processing, approving and issuing subdivision applications, development plans and building permits.

The study of 26 municipalities using 1996 data showed that government-imposed costs on new housing can be substantial. They ranged from as low as \$14,337 a unit — 8.7 per cent of the price—in Yellowknife, N.W.T., to as high as \$50,326 a unit—21.9 per cent of the price—in Vaughan, outside Toronto. The average in the 26 municipalities was \$20,740 a unit, or 13.5 per cent of the price. The study using 2002 data found a similar result, with levies, fees, charges and taxes averaging \$26,694, or 13.7 per cent of the price. Both studies concluded that government-imposed costs directly affect the total cost of housing, and housing affordability. They also found that DCCs are the largest cost component of government-imposed costs, accounting for approximately 32 per cent of all levies, fees, charges and taxes or 68 per cent of total municipal charges.

However, the previous two studies did not give the reasons for and uses of DCCs, nor did they examine other ways of funding municipal infrastructure. Therefore, in 2004, CMHC commissioned IBI Group, a Toronto consulting organization specializing in urban land, facilities and transportation, to make a detailed examination of DCCs and related issues. The study focused on the extent to which DCCs finance municipal infrastructure. This Research Highlight summarizes the key findings of the IBI study, *Uses of development cost charges*.

## METHODOLOGY

The researchers used a case-study approach to analyse the uses of DCCs. To document regional variation, the study examined 10 subdivisions completed in 2000 or 2001: Surrey, B.C.; Calgary and Edmonton, Alta.; Regina, Sask.; Winnipeg, Man.; Brampton, Vaughan and Nepean, Ont.; Longueuil, Que. and Halifax, N.S. It used data from municipalities and developers to document how much on- and off-site infrastructure a new subdivision requires and who pays for what. It also asked if other levels of government provided funds.

Because it relied heavily on the co-operation of municipalities and developers, the study approach has limitations. Data quality was compromised for reasons such as “loss of corporate memory,” confidentiality and non-availability. Since the data provided by municipalities and developers was not validated, the study could not explain why infrastructure costs in one subdivision were higher or lower than in another. Such data issues limited the extent to which subdivisions can be compared.

<sup>1</sup> Development (cost) charges are also called levies, assessments, contributions, trunk services rates, etc.



## DEVELOPER-FUNDED INFRASTRUCTURE

Developers are responsible for both the on- and off-site infrastructure to service new subdivisions. Subdivision agreements govern on-site infrastructure. DCCs pay for off-site infrastructure.

A subdivision agreement between a developer and municipality details the obligations of the developer to provide the internal (also known as on-site) works required to service the subdivision. However, in some municipalities (mostly in Quebec), the municipality actually does the installation of the internal subdivision services. Internal works may include “hard” services, such as roads, driveways, sidewalks, water mains, sewers, and street lighting, and “soft” services, such as parks or parkland development. The details vary by subdivision and municipality, but generally, the developer pays to build and complete all works in a subdivision agreement to the municipality’s satisfaction.

Municipalities impose DCCs on developers to finance new external (also known as off-site) infrastructure to subdivisions. Municipalities rationalize DCCs as “user pay” or “growth should pay for itself;” that is, since the new subdivision makes the services necessary, developers—and buyers of the new homes—should pay the costs. Yet, the connection is limited because municipalities calculate DCCs at the municipal, not the subdivision, level. Furthermore, there are sometimes two-tier, local–municipal and regional–municipal DCCs.

DCCs are not a form of general taxation. Instead, a municipality has a DCC-related bylaw that clearly defines what projects the DCC will fund. The municipality puts all DCC funds in a special reserve until it collects enough money to build these projects. Generally, DCCs provide for off-site hard services such as roads, water, sewers, and police, as well as soft services such as parkland development, recreation facilities, transit, libraries, schools, health, long-term care and growth studies. The services covered by DCCs vary among municipalities.

With the gap of infrastructure needs versus infrastructure funding continuing to widen, municipalities are requiring higher capital cost recovery for the provision of infrastructure or simply requiring developers to front end the capital costs for services. As well, there is no clear distinction in the literature reviewed or whether or not municipalities have calculated in their budgets for recapitalization of their servicing infrastructure or they have not budgeted correctly.

## LEGISLATIVE FOUNDATION

Provincial legislation gives municipalities the authority to charge DCCs through municipal bylaws. Legislation exists everywhere except Prince Edward Island and Quebec.

The authorizing legislations are:

- *Local Government Act* in B.C.
- *Municipal Government Act* in Alberta
- *Planning and Development Act* in Saskatchewan
- *Planning Act of Manitoba*
- *Development Charge Act* in Ontario
- *Municipal Government Act* in Nova Scotia
- *Community Planning Act* in New Brunswick
- *Municipalities Act* in Newfoundland.

No two provinces give exactly the same powers to municipalities for DCCs or for applying them. B.C. and Ontario have comprehensive regimes.

In B.C., the *Local Government Act* requires DCC bylaws to follow the principles of integration, those who benefit pay, fairness and equity, accountability, certainty and consultative inputs. It specifies that DCCs are only to provide, build, alter or expand highways, sewage, water and drainage and to acquire and improve parkland. DCCs are not for soft services, such as child care, employee housing and fire protection.

The *Act* also specifies that DCCs are not required:

- if the building permit is for three or fewer self-contained dwelling units
- if it can be proven that the development does not impose a new capital cost burden on the municipality
- if the value of work covered by the building permit is less than \$50,000.

In calculating DCCs, B.C. municipalities must determine if the proposed DCC is excessive in relation to the prevailing standards; will discourage development in general; or, discourage development of reasonably priced housing or serviced land. Municipalities must also consider funding contributions when calculating DCCs.

Ontario is the only province with a DCC-specific *Development Charge Act* (DCA). Passed in 1997 to provide greater transparency, disclosure and more detailed accounting of development charge revenues and expenditures, the *Act* allows Ontario municipalities to enact DCC bylaws to pay for increased capital costs arising from development.



In determining DCCs, the Act requires municipalities to consider the anticipated amounts, types and locations of development; increases in need and eligible costs of services attributable to growth; and, average service level attained over the last 10 years. It also requires the municipality to reduce the capital cost estimate for infrastructure for any applicable grants, subsidies or contributions to the municipality toward the capital costs concerned.

It does not permit municipalities to impose DCCs for cultural or entertainment facilities, such as museums, art galleries and theatres; for tourism facilities, such as convention centres; or parkland acquisitions, hospitals, waste management services or municipal headquarters, such as city halls.

Ontario is the only province with an *Education Act* enabling school boards to pass bylaws for education development charge (EDCs) if residential development would increase education costs. The legislation requires municipalities to estimate the anticipated amounts, types and locations of residential and non-residential development, the number of new pupils and the education land cost in determining EDCs.

Quebec does not have DCC-related legislation. The 2004 provincial budget announced new financing policies for municipalities through the new *Corporation de financement des infrastructures locales du Québec* to consolidate federal and provincial infrastructure funding for water, transit and roads. Until now, general revenues or negotiations with developers funded off-site infrastructure. Application is inconsistent across the province.

B.C. and Ontario, through DCCs, may have more sophisticated approaches to finance growth-related capital costs of services. However, there is still little information on the calculation of DCCs and few checks and balances to ensure appropriate application.

## CASE STUDIES

Case studies of Brampton and Vaughan illustrate infrastructure costs and the potential factors that influence variations in DCCs and municipal contributions. Table 1 outlines the roles and responsibilities of developers and municipalities by service categories.

Located northwest of the city of Brampton, the Franshore South subdivision was completed in 2001 with 594 singles, semi and row units on 103.7 acres. The developer is responsible for \$21.71 million—97 per cent of the total cost—of developing the site. The total includes \$12.13 million in subdivision-related costs and \$9.58 million in DCCs. Of this total, \$17.19 million was for hard services (\$11.48 million on-site and \$5.71 million off-site) and \$5.18 million for soft services (\$650,000 on-site and \$4.53 million off-site). The hard services include roads, water, sewers, stormwater, fire and police. Soft services include transit, recreation, parkland, public works and libraries. On a per unit basis, each house includes \$37,700 worth of infrastructure, with the municipality contributing \$1,100. A subdivision agreement contributed \$20,400 and DCCs \$16,100.

Fanshore South, Brampton				
	Municipality	DCC	Subdivision agreement	Total
On-site hard services	Unknown*	Unknown	\$11.48 (100%)	\$11.48 (51%)
On-site soft services	Unknown	Unknown	\$0.65 (100%)	\$0.65 (3%)
Off-site hard services	\$0.35 (6%)	\$5.36 (94%)	Unknown	\$5.71 (26%)
Off-site soft services	\$0.31 (7%)	\$4.22 (93%)	Unknown	\$4.53 (20%)
Total	0.66 (3%)	\$9.58 (43%)	\$12.13 (54%)	\$22.37 (100%)
Dufferin Hill, Vaughan				
On-site hard services	Unknown	Unknown	\$10.37 (100%)	\$10.37 (45%)
On-site soft services	Unknown	Unknown	\$0.24 (100%)	\$0.24 (1%)
Off-site hard services	\$1.22 (17%)	\$6.07 (83%)	Unknown	\$7.29 (31%)
Off-site soft services	\$0.61 (12%)	\$4.22 (88%)	Unknown	\$5.24 (23%)
Total	\$1.83 (8%)	\$10.29 (46%)	\$10.61 (46%)	\$23.14 (100%)
*“Unknown” means that data is incomplete because it was either not accessible or not provided.				

Table 1: Ontario subdivision case studies (in millions of dollars)



In Vaughan, the Dufferin Hill subdivision was completed in 2000 and includes 579 single, semi and row units on 77.8 acres. The developer is responsible for \$21.32 million—92 per cent of the total infrastructure costs—and the municipality the remaining \$1.83 million, or eight per cent. The total infrastructure per house is \$40,000, with the municipality contributing \$3,200, the subdivision agreement \$18,500 and DCCs \$18,300.

As Table I shows, DCCs varied—as they varied in the remaining eight subdivisions studied. There are numerous factors contributing to these variations:

- topography or soil conditions
- development standards, from stormwater retention requirements to amount and location of sidewalks
- eligible capital costs, from hard costs only to both hard and soft costs, with some municipalities allowing financing charges and others specifically not

- service categories and levels (for example, courtrooms, city hall debt, health, ambulance)
- labour and construction costs
- high-demand markets, where most development is greenfield development, generally require more investment in infrastructure.

However, reasons for the difference in municipal contribution between Brampton and Vaughan are less evident. Since infrastructure, such as roads, water, sewer and transit, was more expensive in Vaughan, the municipality's percentage of share of infrastructure costs may have increased as a result. Again, because data provided by municipalities was not validated, the study does not explain why infrastructure costs in one subdivision are higher or lower than in another.

	<b>Total units</b>	<b>Areas (acres)</b>	<b>Density (units/acre)</b>	<b>Cost per unit (\$)</b>
Winnipeg (incomplete)	212	20.1	10.5	1,890
Nepean	203	23.9	8.49	24,300
Vaughan	579	77.8	7.44	40,000
Halifax	211	29.3	7.2	21,100
Longueuil	142	21.2	6.7	52,100
Surrey	171	25.8	6.63	26,300
Brampton	594	103.7	5.73	37,700
Edmonton	107	25.8	4.15	25,900
Calgary (incomplete)	105	27.3	3.85	5,100
Regina	82	22.8	3.6	35,700

Table 2: Infrastructure costs and density

## DENSITY AND INFRASTRUCTURE COSTS

It is often assumed that because more compact development requires fewer linear feet of roads, water mains, storm sewers and sewer pipes, infrastructure costs are cheaper.

Table 2 calculates density as the total number of units in each subdivision divided by acres, and ranked from high to low by subdivision. It shows inconsistent correlation between density and infrastructure costs. Density increases from 5.73 to 7.44 units per acre from Brampton to Vaughan, but infrastructure costs increase as well. As for Longueuil, it has the highest—\$52,000—infrastructure cost per unit, but similar density to Halifax, one of the lowest infrastructure costs<sup>2</sup>.

## WHO PAYS?

Table 3 summarizes who pays for infrastructure.<sup>3</sup> It shows no DCCs in Longueuil and Winnipeg<sup>4</sup>. Quebec municipalities generally do not rely on DCCs to fund growth-related capital, and Winnipeg, although it has access to them, does not generally impose DCCs.<sup>5</sup>

	Developer (subdivision agreement)	Developer (DCC)	Municipality	Total
Surrey	2.86 (?)*	1.63 (?)	unknown	4.49
Calgary (incomplete)	0.23 (?)	0.30 (?)	unknown	0.53
Edmonton	2.22 (?)	0.55 (?)	unknown	2.77
Regina	2.34 (?)	0.59 (?)	unknown	2.93
Winnipeg (incomplete)	0.20 (50%)	0	0.20 (50%)	0.40
Brampton	12.13 (54%)	9.58 (43%)	0.66 (3%)	22.37
Vaughan	10.62 (46%)	10.70 (46%)	1.83 (8%)	23.15
Nepean	2.22 (?)	2.72 (?)	unknown	4.94
Longueuil	4.34 (59%)	0	3.06 (41%)	7.39
Halifax	30 (72%)	6.80 (16%)	4.71 (11%)	41.5
* “?” means the share cannot be calculated because the real total is unknown.				

Table 3: Who pays? (in millions of dollars)

<sup>2</sup> Winnipeg, being the densest subdivision with about 11 units per acre, has the lowest infrastructure costs, at about \$1,900 per unit. However, since data is incomplete, it may be premature to conclude that there is a correlation between density and infrastructure costs.

<sup>3</sup> Data in Table 3 must be interpreted with caution because municipal costs are not available for half the case studies. It may imply a higher or lower share of infrastructure costs borne by developers than is actually the case.

<sup>4</sup> While there are no DCCs in Winnipeg, they have a trunk service rate on an area basis and may assess relevant costs associated with adjacent major roads/arterials.

<sup>5</sup> For some municipalities, the response to “who pays” was simply answered with “the developer pays for everything.” This response was typical of municipalities not imposing DCCs. In circumstances where a municipality does not impose DCCs, developers pay for much of the infrastructure.



As Table 3 shows, developers are solely responsible for internal subdivision infrastructure costs and some municipalities may pay some cost of external infrastructure, but not much (except in the case of Longueuil). In Brampton and Vaughan, for example, developers pay for more than 90 per cent of the known infrastructure costs. DCCs in Brampton cover 43 per cent of the total known costs and DCCs in Vaughan, 46 per cent. In Longueuil, without DCCs, the developer contributes 59 per cent or \$4.34 million and the municipality 41 per cent or \$3.06 million of total infrastructure costs. In Winnipeg—where data is incomplete—it appears that the developer and municipality co-share infrastructure costs. However, DCCs as a percentage of the total infrastructure costs will increase if the internal infrastructure costs were excluded from the base for the percentage calculation.

## DCC SURPLUSES AND SHORTFALLS

Asked about DCC surpluses, municipalities typically said there has never been a DCC surplus. If there were a surplus in Calgary, Regina, Winnipeg, Brampton, Vaughan and Ottawa, it would be used to reduce DCCs in the following year. However, in Halifax, surplus DCC would either remain in the reserve to fund future works or be added to the municipality's general revenues. In Surrey, a surplus would be carried forward to the next year.

As for shortfalls, there was a variety of responses. Five municipalities (Regina, Winnipeg, Brampton, Vaughan and Nepean) said that if there were a shortfall, they would increase DCCs for the following year and borrow between service category accounts as an interim measure. In Calgary, the provincial government subsidizes the shortfall, as has happened many times.

## OTHER FUNDING SOURCES

Four municipalities reported infrastructure funding from other levels of government:

- provincial cost-sharing of an interchange adjacent to the Ravines of South Bedford in Halifax
- provincial and federal cost-sharing of the York Region transit system adjacent to the Vaughan subdivision
- federal, provincial and municipal cost-sharing of major overpasses in Regina
- provincial infrastructure funding in Calgary.

It is not known what the effect of funding is on DCCs. The remaining seven municipalities did not report funding from other levels of government.

In 2000, the federal government introduced infrastructure initiatives to enhance municipal infrastructure.

- The Infrastructure Canada Program (ICP) is a six-year, \$6 billion program in partnership with provincial, territorial and municipal governments, First Nations and the private sector, to renew and enhance Canada's physical infrastructure.
- The \$250 million Green Municipal Fund (GMF) removes investment barriers to green municipal infrastructure with the aim of reducing greenhouse gas emissions, improving local air, water and soil quality and promoting renewable energy.
- The five-year Strategic Highway Infrastructure Program (SHIP) renews and enhances Canada's highway infrastructure.

Municipalities in this study were not aware of any funding received from these programs. One explanation is that, since the subdivisions were completed in 2000 and 2001, they were not yet within the reach of these federal infrastructure initiatives.

As for the recently announced GST rebate, most Ontario municipalities, for example, have adjusted their DCC calculations to exclude the GST. One municipality is using the GST rebate to fund a transit project.

## OTHER FINANCING APPROACHES

As noted above, DCCs are intended to reimburse municipalities for some or all of the costs of infrastructure required in a new development, but there are some municipalities going beyond DCCs to require additional funding from developers. This includes capital provision, in addition to DCCs and subdivision costs paid by the developers. It is based on the policy that growth pays for itself rather than having existing taxpayers fund growth-related capital. When a municipality cannot finance infrastructure, it turns to the development community to fund the shortfall in the growth related capital. This approach is well established in Milton, near Toronto, where developers pay an average of \$1,800 in capital provision, in addition to more than \$37,000 in DCCs per unit. This amount does not differ by unit type, and does not apply to non-residential development. Capital provision has helped Milton grow from 32,000 in the mid-1990s to 150,000 today. Whitchurch-Stouffville, also near Toronto, is examining the use of capital provision for its potential contribution to economic growth.



There is also cash flow assistance when a municipality is not in a financial position to afford the required infrastructure for the proposed phases of development within the planning horizon forcing the municipality's debt capacity above policy limits. The quantum is to be secured at the subdivision agreement stage by letters of credit; it is also indexed on an annual basis, similar to DCCs. Again, this approach is being used in Milton, where developers pay cash flow assistance of \$2,500 per unit, on top of DCCs and capital provision.

"Density bonusing" allows developers to add more floor area or density in exchange for providing facilities and services that benefit the community, such as day care, recreational or community centres or affordable housing. This approach is used most often in downtown and other densely developed areas, where the developer can get more yield per unit of land and the municipality more revenue.

Other municipal financing approaches include using property tax revenues, user fees—rates, permit and licence revenues.

## CONCLUSIONS

The study confirms that infrastructure is a significant cost component in developing a subdivision. Developers are responsible for most infrastructure costs, paying both subdivision agreement costs for on-site infrastructure and DCCs for off-site infrastructure. In fact, in most cases, developers pay all of the internal subdivision infrastructure costs, while municipalities pay little for the cost of external infrastructure.

The approach to subdivision agreement is fairly consistent across the country, but DCCs are not well understood. There is not always a direct relationship between the DCCs paid and the costs of infrastructure for a subdivision, because DCCs are calculated at the municipal, not subdivision, level. Furthermore, even though DCCs are rationalized on the notion of "user pay" or "growth should pay for itself," it fails to take into consideration the benefits of growth to society as a whole. Be it infill or greenfield, new residential development accommodates growth, provides housing choice, creates jobs that in turn have economic spin-offs and multiplier effects resulting in growth in the sectors of the economy.

In Canada, no two provinces have exactly the same legislative powers regarding DCCs and housing affordability is usually not taken into account by municipalities. The only exception is B.C. where impact on affordability is a requirement in determining DCCs. Ontario legislation says funding contributions must be considered when calculating DCCs, but no such reduction was found in the case study subdivisions. While B.C. and Ontario have the most comprehensive DCC regimes in Canada, the calculations are

challenging to follow and not easily duplicated. With little checks and balances to ensure that DCCs are fair, equitable, and applied appropriately, it raises concerns about transparency and accountability and fears that the collection of the DCCs may not necessarily translate into the realization of projects on the ground.

As noted above, DCCs are intended to reimburse municipalities for some or all of the costs of infrastructure required for a new development. Typically, there has never been a DCC surplus in the 10 case studies, but if there were, it would be used to reduce DCCs in the following years, or remain in the reserve to fund future works or be added to the municipality's general revenues. If there were DCC shortfalls, municipalities will increase DCCs for the following year, borrow between service categories or seek subsidies from provincial governments. Municipalities may also impose additional charges, such as capital provision and cash flow assistance to fund growth-related infrastructure.

There are also funding from other levels of government with a view to reducing DCCs and enhancing municipal infrastructure. However, among the 10 case studies, municipalities were unaware of any funding from federal infrastructure programs, probably because the subdivision studies were completed in 2000 or 2001. It is also felt that these programs do not trickle down to have a meaningful impact on infrastructure costs at the subdivision level. As for the recently announced GST rebate, most Ontario municipalities, though, have adjusted their DCC calculations to exclude the GST.

This study's findings are limited by the fact that some municipalities were unable to provide data due to "loss of corporate memory," confidentiality and unavailability. Without complete data, real total infrastructure costs cannot be determined and percentages calculated above should be interpreted with caution because they may imply a higher or lower share of infrastructure costs actually borne by developers. This limited the extent to which findings in one subdivision can be compared to findings in another and the extent to which definitive conclusions can be drawn from the study.



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### **Housing Research at CMHC**

Under Part IX of the *National Housing Act*, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research.

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